

Appendix

For the preparation of samples, the following materials were used.

1. 10x Hepes-Puffer (10 mM 1,4-Dithio-DL-Threitol (Fluka), 100 mM MgCl_2 (Merck) und 500 mM 4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid (Fluka))
2. 1 % w/v Pluronic F-127 (Sigma)
3. 50 % w/v Sucrose (Merck)
4. Ink Königsblau (100 %) Nr. 4001 (Pelikan)
5. 30 μM 5-TAMRA-labelled Peptide* (Merck) in 100 % DMSO; see Fig. 3
6. 5-Carboxytetramethylrhodamine (5-TAMRA) (Molecular Probes)

The following samples were tested:

- | | |
|-------------------|---|
| 1. „Buffer“ | 1x Hepes, 0.05 % Pluronic, 10 nM Peptide* |
| 2. „2 % Sucrose“ | 1x Hepes, 0.05 % Pluronic, 10 nM Peptide*, 2 % Sucrose |
| 3. „10 % Sucrose“ | 1x Hepes, 0.05 % Pluronic, 10 nM Peptide*, 10 % Sucrose |
| 4. „0.4 % Ink“ | 1x Hepes, 0.05 % Pluronic, 10 nM Peptide*, 0.4 % Ink |
| 5. „2 % Ink“ | 1x Hepes, 0.05 % Pluronic, 10 nM Peptide*, 2 % Ink |
| | |
| 6. „Buffer“ | 1x Hepes, 0.05 % Pluronic, 5 nM TAMRA |
| 7. „2 % Sucrose“ | 1x Hepes, 0.05 % Pluronic, 5 nM TAMRA, 2 % Sucrose |
| 8. „10 % Sucrose“ | 1x Hepes, 0.05 % Pluronic, 5 nM TAMRA, 10 % Sucrose |
| 9. „0.4 % Ink“ | 1x Hepes, 0.05 % Pluronic, 5 nM TAMRA, 0.4 % Ink |
| 10. „2 % Ink“ | 1x Hepes, 0.05 % Pluronic, 5 nM TAMRA, 2 % Ink |

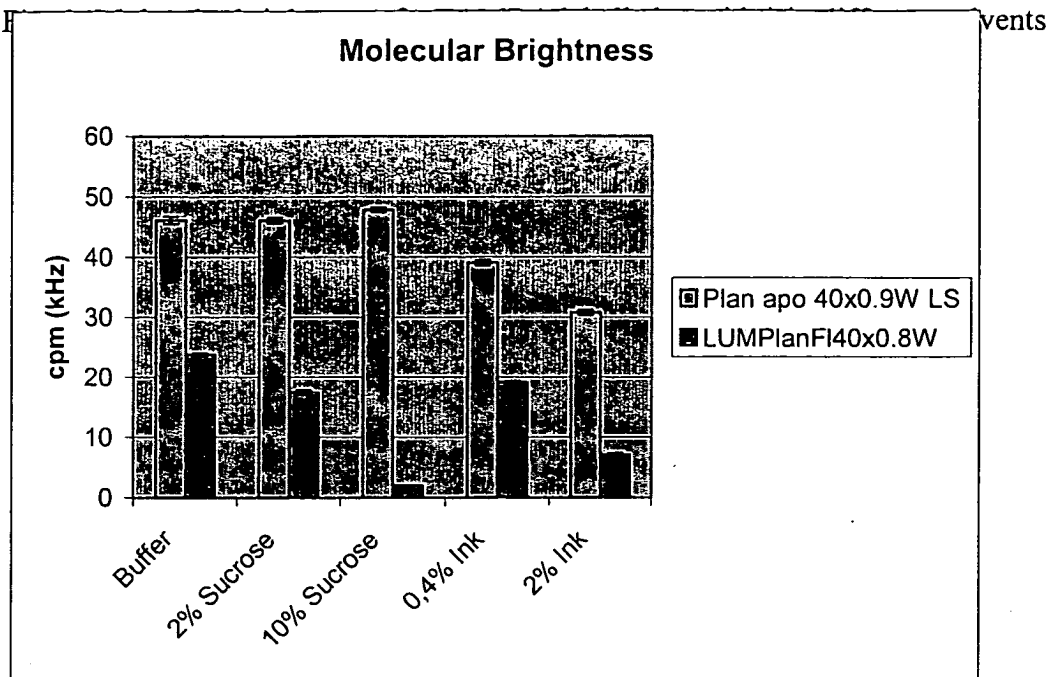


Fig.1

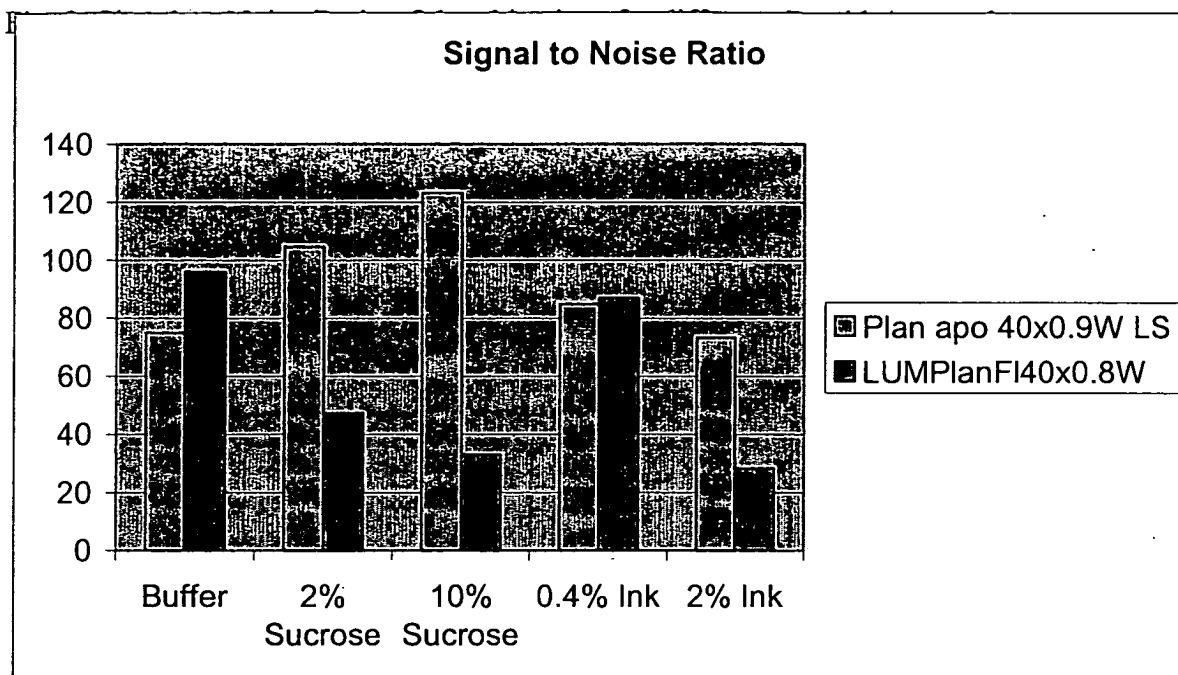


Fig. 2

TABLE 1

Olympus PlanApo 40x 0.9 W LS: measured volume arranged at a distance of 420 μm from the laser focussing optic

Buffer	cpm (kHz)	STD (cpm)	Diff (μs)	STD (Di
TAMRA	48.84	0.344	73.20	1.2
Peptide*	46.13	0.62	159.7	3.8

2 % Sucrose	cpm (kHz)	STD (cpm)	Diff (μs)	STD (Di
TAMRA	48.24	0.42	77.7	1.9
Peptide*	46.10	0.44	163.7	5.2

10 % Sucrose	cpm (kHz)	STD (cpm)	Diff (μs)	STD (Di
TAMRA	51.38	0.62	99.1	3.2
Peptide*	47.84	0.39	208.7	5.4

0.4 % Ink	cpm (kHz)	STD (cpm)	Diff (μs)	STD (Di
TAMRA	39.42	0.25	76.8	3.3
Peptide*	39.06	0.46	160.0	4.7

2 % Ink	cpm (kHz)	STD (cpm)	Diff (μs)	STD (Di
TAMRA	27.8	0.5	75.5	3.6
Peptide*	30.8	0.42	151.4	3.4

TABLE 2

**Olympus LUMPlanFI 40x 0.8 W; measured volume arranged at a distance of 3300 μm
from the laser focussing optic**

Buffer	cpm (kHz)	STD (cpm)	Diff (μs)	STD (Di
TAMRA	24.71	0.86	82.60	5.9
Peptide*	23.75	0.25	172.5	7.3

2 % Sucrose	cpm (kHz)	STD (cpm)	Diff (μs)	STD (Di
TAMRA	16.93	0.64	96.0	7.4
Peptide*	17.49	0.37	196.5	15.1

10 % Sucrose	cpm (kHz)	STD (cpm)	Diff (μs)	STD (Di
TAMRA	1.97	0.17	-	-
Peptide*	1.98	0.06	-	-

0.4 % Ink	cpm (kHz)	STD (cpm)	Diff (μs)	STD (Di
TAMRA	19.30	0.62	78.4	2.0
Peptide*	19.16	0.22	169.0	5.2

2 % Ink	cpm (kHz)	STD (cpm)	Diff (μs)	STD (Di
TAMRA	5.53	0.94	107.5	42.8
Peptide*	7.1	0.25	162.7	13